



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,882	02/01/2007	David E. Vokey	85533-102	8847
23529	7590	12/30/2009		
ADE & COMPANY INC. 2157 Henderson Highway WINNIPEG, MB R2G1P9 CANADA			EXAMINER VALONE, THOMAS F	
			ART UNIT	PAPER NUMBER
			2831	
			MAIL DATE	DELIVERY MODE
			12/30/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,882	Applicant(s) VOKEY ET AL.	
	Examiner THOMAS F. VALONE	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12,13,15,16 and 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12,13,15,16 and 18-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12, 21 and by dependence claims 13, 15, 16, 18-20, 22-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claim limitation, "the probes of each pair being electrically separated from the other" does not appear in the PCT WO 2005/010837 disclosure originally filed with the instant application. Furthermore, the amendment drastically alters the invention to apparently insert an insulator in the construction of each industrial staple in an attempt to electrically isolate each pin probe of the staple from the other as claimed, which also has no antecedent basis in the specification, since each probe is claimed to be a "rigid elongate conductive element" that is broadly interpreted to be the same as a nail or pin, which occurs in pairs with the standard construction staple, connected by a horizontal crown, as is well known to one of ordinary skill.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2831

4. Claims 12, 21 and by dependence claims 13, 15, 16, 18-20, 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not understood how the “pair of conductive probes” in the amended claims 12 and 21, which are disclosed as part of a “dual prong design” interpreted as a single staple and inserted with a “standard construction-stapling tool” (PCT WO 2005/010837 disclosure, p. 7), can perform any useful function if the “first probe...engage(s) the first conductor” and the “second probe of each pair...engage(s) the second conductor of the tape” as claimed, since this precise arrangement will effectively short out the two conductors electrically by following such instructions explicitly, to one of ordinary skill, with standard industrial staples being used as the pair of probes. It is not clear how each claimed “probes of each pair” can function any differently than as interpreted above unless they follow a different method that has not been claimed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2831

6. Claims 12, 13, 15, 16, 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (GB 2235535) in view of Gott (6,175,310) both of record and Contractors Depot Stainless Staples.

Regarding claims 12, 18, 20, 21, 25, 27, 28, Stewart from the same field of endeavor teaches a method of detecting moisture in an absorbent material by providing a tape (3, Fig. 6) formed by a substrate and a first and second spaced apart elongate parallel conductors mounted on top of the substrate (1, Fig. 1) and a layer of permeable mounting adhesive on a bottom surface of the substrate (2, p. 3 and Fig. 1). Stewart also teaches a non-hydroscopic material (non-permeable and permeable insulation 8, p. 3 and Fig. 6) applied to the tape as in claim 27. Stewart further teaches attaching the tape using the adhesive to be "fixed to the structure" (p. 3) so as to mount the two conductors on or adjacent to the surface of the building material (Fig. 2-5) as in claim 12, 28. Stewart also teaches applying a voltage (power source 6, p. 3 and Fig. 5, 8) across the two conductors and monitoring currents so as to detect changes in resistance between the conductors caused by moisture in the material (resistance, p. 3) with the same intended use of a conductive probe (permeable adhesive) as in claims 12, 21, 27.

Stewart does not teach penetrating the first and second conductors of the tape with a respective one of a pair of conductive probes such that each of the conductive probes engages into the absorbent material and is electrically connected to the respective conductor. Stewart does not explicitly teach a substrate of dielectric, hydrophobic material.

Art Unit: 2831

Contractors Depot from an analogous field of endeavor teaches rigid elongate conductive probes that come in pairs, interpreted as a U-shaped staple (316 Senco Stainless Steel Collated Staples 16 gauge Contractors Depot "P" Series, Contractors Depot, p. 3, archived 6/9/2003 webpage) which has a one inch crown attached to a pair of conductive probes extending downward from the crown. It is well known to one of ordinary skill in the art to force the plurality of Contractors Depot electrically conductive probes, such as the Contractors Depot corrosion resistant stainless steel nails and brads (p. 1, archived webpage 12/3/2000), longitudinally along respective spaced locations as in claim 20 along the length of any material being secured including timber frame or dry wall as they are forced to penetrate into almost any material as in claims 12, 18, 21, 25 with a necessary and sufficient additional hammer, staple insertion tool, or air gun that is omitted and not claimed. Furthermore, the applicant admits that such a construction staple is the same as the claimed pair of probes since it can be inserted with a "standard construction-stapling tool" (PCT WO 2005/010837 disclosure, p. 7), which can be expected to perform the same method as claimed, to one of ordinary skill.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have forced the Contractors Depot corrosion resistant conductive probes into the Stewart moisture detecting tape for the benefit of securely engaging the tape as well as each of the first and second conductors to the absorbent material, as steel construction staples are well known to accomplish to one of ordinary skill, while possibly electrically connecting to the respective conductor if they happen to be hammered through the tape in the right spot, which would be quite obvious to do

Art Unit: 2831

when detecting moisture from the adjacent material, as suggested by Stewart (permeable, p. 3 and Fig. 6).

The teachings of Stewart and Contractors Depot (S-C) are reviewed above.

S-C does not explicitly teach dielectric, hydrophobic material for a substrate.

Gott from the same field of endeavor teaches a dielectric, hydrophobic material for a substrate of the leak detection dual conductor system tape (substrate 21, col. 3, line 48-55) that can be plastic or rubber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the Gott hydrophobic dielectric material for a substrate in the S-C method for detecting moisture for the benefit of being flexible and no thicker than 20 mils so as not to impede the flow of small droplets of water, as suggested by Gott (col. 3, line 50-55).

7. Regarding claims 13, 22, Stewart teaches a dielectric, non-hydroscopic material (non-permeable and permeable insulation 8, p. 3 and Fig. 6) secured to the top surface of the substrate and extending over the conductors. However, a shorting hazard is also noted in the Stewart reference (p. 3) with the presence of moisture on top of the water permeable layered tape and furthermore, the added claimed limitation of a "water permeable" layer on top of the conductors seems to contradict the preamble of the independent claims 12 and 21 and defeat their purpose, which are directed only to "detecting moisture in an absorbent material".

8. Regarding claims 19, 26, Stewart teaches the absorbent material is a moisture permeable element of a building construction (timber framed, p. 1 and Fig. 5).

Art Unit: 2831

9. Regarding claims 15, 23, Stewart does not indicate the width of the tape conductors or the content being metal.

Gott teaches that the width of the conductors is preferably between $\frac{1}{4}$ and 1 inch wide (col. 4, line 10-15), which converts to between 6.5 mm and 25 mm. Gott further teaches that the conductors are flat metal strips (electroplating, col. 3, line 66 and foil, col. 4, line 1) as in claims 15, 23.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the Gott recommended flat metal strip conductors of at least 6.5 mm in the Stewart method for detecting moisture for the benefit of ensuring that the detection tape is sufficiently sensitive to small water droplet moisture (col. 4, line 15-20).

10. Regarding claims 16, 24, Stewart does not indicate the gap spacing distance of the conductors.

Gott teaches the gap spacing between conductors should be between $\frac{1}{4}$ " and 1.5" which converts to between 6.5 mm and 38 mm, which encompasses the claimed 13 mm as in claims 16, 24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the Gott recommended flat metal strip conductors spacing of at least 13 mm in the Stewart moisture detection tape for the benefit of facilitating easier connection to various leak detection devices having different terminal spacings, as suggested by Gott (col. 4, line 23-26).

Response to Arguments

11. Acknowledgement is given for the amendment to the drawings to which the objection to the drawings has been withdrawn. Acknowledgement is given for amendment to the claims which adds a new intended use of “corrosion resistant material” and method step of “forcing” which is broadly interpreted to include the use of the disclosed construction stapling tool, though the term appears to lack antecedent basis in the specification. Acknowledgement is given for the explanation of the water pervious layer which apparently is intended to receive moisture from the air or outer surface of the material. As a result, three of the rejections under 35 USC 112 have been withdrawn.

12. Applicant's arguments filed 8/28/09 have been fully considered but they are not persuasive.

13. As to the argument that the amendment “probes of each pair are electrically separated from the other” clears up the “objection” which is actually a rejection under 35 USC 112-2nd, unfortunately, the amendment seems to have no antecedent basis in the specification and therefore has generated a further rejection under 35 USC 112-1st. Furthermore, since each probe is claimed and disclosed as a “rigid elongate conductive element”, it leaves no other interpretation possible but one single pin of a pair that comes with each industrial staple, to one of ordinary skill.

14. As to the argument concerning the “objection” concerning claims 13 and 22, there was no objection cited in the previous Office Action concerning claims 13 and 22. Instead, the rejection under 35 USC 112-2nd has been withdrawn in regards to claims 13

Art Unit: 2831

and 22 since the arguments regarding the claimed limitations, “non-hygroscopic” and “water pervious” though actually contradictory terms, as best understood, apparently allow such a claimed “protective layer” to be pervious to water and therefore does not protect the conductor as claimed but instead apparently will form a parallel moisture-laden layer path above the conductor for electricity in addition to going through the absorbent building material for the moisture probes, to one of ordinary skill in the electrical art to which this invention pertains. However, a shorting hazard is also noted in the Stewart reference (p. 3) with the presence of moisture on top of the water permeable layered tape and furthermore, the added claimed limitation of a “water permeable” layer on top of the conductors seems to contradict the preamble of the independent claims 12 and 21 and defeat their purpose, which are directed only to “detecting moisture in an absorbent material”.

15. Regarding the argument that the construction staples which are claimed to be an invention called a pair of “conductive probes” are now admitted by the applicant to be “well known” and therefore in the prior art (Remarks, 8/28/09, p. 9), it is not persuasive that the manner in which the staples are forced into the leak detecting tape, which is also in the prior art, is somehow an innovative step, since even the tools to do so are in the prior art. Under the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. Furthermore, when a prior art device is the same as a device described in the specification for carrying out

Art Unit: 2831

the claimed method, it can be assumed the prior device will inherently perform the claimed process. *In re King*, 231 USPQ 136 (Fed. Cir. 1986) and MPEP § 2112.02.

16. As to the argument that the manner in which the staples are forced into the tape may cause shorting, this apparently relates to the rejection under 35 USC 112 which cites the “water pervious layer” that creates the confusing, shorting hazard, to one of ordinary skill in the electrical art and noted by Stewart (p. 3), since there seems to be no disclosed manner in which the staples are able to avoid contacting the water pervious layer and therefore conducting electricity through that top layer as well as the bottom building material which is supposed to be the purpose of the independent claims 12, 21 method of detecting moisture content “in an absorbent material.” In other words, from the applicant’s insistence on a claimed water pervious layer in claims 13, 22, it appears that the invention will function as a dual sensor of moisture above (which is clearly claimed by the above-conductor (sans probe) moisture sensor of claim 27) and below the tape since a parallel path for the current *reduces the actual results of the moisture measurement of building material*, as any current divider circuit will do, to one of ordinary skill in the electrical art and fails to conform to the claimed method of the independent claims 12, 21.

17. As to the argument that Stewart teaches a non-permeable insulation which does not meet the claimed pervious layer, it is noted that actually Stewart teaches “permeable insulation 5 or suitable non-permeable insulation 8” (p. 3) which seems to cover both possibilities as claimed.

Art Unit: 2831

18. As to the argument for claim 13 providing “an additional water pervious layer” (Remarks, 8/28/09, p. 11, 3rd par.), it is not understood what the initial water pervious layer might be, since the independent claim 12 has no such claimed limitation and is only directed to “a method of detecting moisture in an absorbent material.”

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS F. VALONE whose telephone number is (571)272-8896. The examiner can normally be reached on Tu-W-Th, 10:30-7:00.

Art Unit: 2831

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas F Valone/
Examiner, Art Unit 2831

Thomas Valone
Patent Examiner
Art Unit 2831
571-272-8896